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| **United States Department of Agriculture** | **Forest Service** | **Wallowa-Whitman National Forest** | **La Grande Ranger District<br>3502 Highway 30<br>La Grande, OR 97850** |

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**Subject:** Sheep – Economics Analysis

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# Introduction

The economic impact analysis is used to identify potential impacts to economic conditions such as employment and income. The effects of the alternatives on the local economy are discussed in terms of investments to individual projects for contracted work, number of jobs in the forest, wages associated with jobs, and the total economic output to local economies.

## Scale of Analysis

The boundary of the direct, indirect and cumulative effects analysis area includes the five counties surrounding the Sheep Creek project area (Baker, Grant, Umatilla, Union, Wallowa counties). This five-county area provides a potential workforce to implement the project, as well as existing infrastructure and delivery points involved with wood product manufacturing.

For this five-county region, an estimated 49.1% of the land base is federal land, of which 43.1% is Forest Service ownerships. See table 1 below for ownership patterns within each individual county.

*Table 1: land Ownership by County*

| County | Federal Land Ownership | Forest Service Land Ownership |
|---|---|---|
| Baker County | 1,011,648 acres (51.2%) | 647,812 acres (32.8%) |
| Union County | 623,591 acres (47.8%) | 616,213acres (47.2%) |
| Grant County | 1,763,748 acres (60.8%) | 1,590,516 acres (54.9%) |
| Umatilla County | 449,003 acres (21.7%) | 405,523 acres (19.6%) |
| Wallowa County | 1,187,755 acres (58.9%) | 1,163,928 acres (57.7%) |

*Estimates from Headwaters Economics, Economic Profile System (2016 basis)

## *Purpose and Need, Key Issues, Key Indicators, and Measures*

This section directly addresses Purpose and Need element 8. The following resource indicators are used to compare the effects of action alternatives on the Key Issue of economics.

*Table 2: Key indicators*

| Key Indicator | Measure |
|---|---|
| Investments | Dollars |
| Wages | Dollars |
| Employment | Jobs Created |
| Economic output | Dollars |

# Existing Conditions

In 2001, timber represented 3.6% of total employment in the local five county region. In 2019, timber representation had been reduced to 3.6% of the total employment. See table 3 below for a summary of estimated timber jobs and total workforce these jobs represent for each county.

*Table 3: 2019 Job Totals by County*

| County | Timber<br>Forestry, Logging and Support, Manufacturing Facilities |
|---|---|
| Baker County | 170 jobs (2.0%) |
| Union County | 393 jobs (2.7 %) |
| Grant County | 323 jobs (8.2 %) |
| Umatilla County | 1522 jobs (3.8%) |
| Wallowa County | 196 jobs (3.9%) |

*Estimates from Headwaters Economics, Economic Profile System (accessed 2020)

# Desired Future Condition

The goal is to provide for the sustainable production of wood products to satisfy national needs and benefit local economies and communities consistent with natural resource objectives, environmental constraints, and economic efficiency.

# Economic Consequences

The following describes the assumptions utilized for analyzing the effects of implementing alternatives based upon estimated contract investments.

Numerous contracts would be offered to accomplish the project activities identified in each alternative. Service contract types could be utilized, in areas where the value of products would be insufficient to offset the cost of work in all action alternatives, stewardship contracts could be utilize to trade the value of timber for project work done in this area. Contracts may include a variety of work such as timber harvest activities (including costs associated with stump to truck, haul, road maintenance, reconstruction and temporary road costs), forest road improvements (fish passage culvert), and fuels reduction treatments.

Potential investments have been incorporated into a model that provides a relative comparison between alternatives in terms of potential economic effects to local communities. Contract costs were estimated based on removal volumes for harvest type work, treatment acres of fuels/vegetation management work and treatment miles for road reconstruction work.

*Table 4: Contract Investment Assumptions and Alternative Comparison*

| Type of Work | Investment Value | Acres by Alternative | | |
|---|---|---|---|---|
| | | Alternative 1 | Alternative 2 | Alt. 3 |
| Ground Based Logging | $150/MBF | 0 | 12 MBF | 5.5 MBF |
| Skyline Logging | $300/MBF | 0 | 0 | .6 MBF |
| Tethered Logging | $150/ MBF | 0 | 2 MBF | 0 |

| Type of Work | Investment Value | Acres by Alternative | | |
|---|---|---|---|---|
| | | Alternative 1 | Alternative 2 | Alt. 3 |
| Road Reconstruction | $25,000/mile | 0 | 1.7 | 1.7 |
| Road Maintenance | $500/ mile | 0 | 23.06 | 7.78 |
| Road Decommissioning | $2434/ mile | 0 | .16 | .16 |
| Culvert Replacement Fish Passage | $100,000 | 0 | 0 | 0 |
| Temporary Culverts | $5,000 | 0 | 11 | 1 |
| Meadow Restoration | $200/ ac | 0 | 36 | 36 |
| PCT – Hand Precommercial thin | $225ac | 0 | 935 ac | 263 ac |
| FUH- Hand Fuel Reduction | $ 200 ac | 0 | 2416 ac | 2012 ac |
| FUM-M Fuel Reduction Mechanical | $200/ac | 0 | 3855 ac | 3326 ac |
| PCT- M Precommercial thin Mechanical | $200/ ac | 0 | 989 ac | 423 ac |
| Whipfell Hand work | $75ac | 0 | 3367 ac | 1308 ac |
| Jackpot Burn | $100/ ac | 0 | 8231 ac | 6060 ac |
| Pile Burn | $85/ ac | 0 | 4844 ac | 3749 ac |
| Planting | $600/ac | 0 | 1480 ac | 528 ac |

# Direct and Indirect Effects of Alternative 1 – No Action

This alternative would not implement any of the activities proposed in the action alternatives, and as a result there would be no investment revenue received, jobs produced or wages earned from logging, fuels reduction, and road work within the counties surrounding the Sheep Creek project area. Economic contributions from recreation related activities would continue, such as hunting or All-Terrain Vehicle use.

# Direct and Indirect Effects of Alternatives 2 and 2M, and 3

### *Investments*

The following table summarizes the total estimated investment for each type of work and the total for each action alternative.

*Table 5: Investments by Alternative*

| Alt | Type of Work | Expected Investment for Each Type | Total Investment |
|---|---|---|---|
| 2 | -Harvest Related Work (Ground base and tethered logging systems)<br>-Reconstruction, Maintenance, Decommissioning, Culverts Replacement (temp./ permanent)<br>-Fuels Reduction/Vegetation Management/ RX burning<br>-Reforestation<br>- Meadow Improvement | $2,4000,000<br>$109,419<br><br>$2,897,215<br>$592,000<br>$7,200 | $6,005,834 |

| Alt | Type of Work | Expected Investment for Each Type | Total Investment |
|---|---|---|---|
| 3 | -Harvest Related Work (Ground base and skyline systems)<br>-Reconstruction, Maintenance, Decommissioning, Culverts Replacement (temp./ permanent)<br>-Fuels Reduction/Vegetation Management/ RX burning<br>-Reforestation<br>-Meadow Improvement | $1,005,000<br>$51,779<br>$2,196,040<br>$211,200<br>$7,200 | $3,471,219 |

### *Wages*

Wages would be earned because of the jobs produced or maintained from the contract work. Total wages earned on a project vary by the proportion of hand work versus mechanical work on a project, with hand labor wages typically being lower than equipment intensive work.

*Table 6: Direct Wages, Indirect Wages and Total Wages earned for each alternative.*

| Alternative | Direct Wages | Indirect Wages | Total Wages |
|---|---|---|---|
| 2 | $1,683,610 | $2,581,130 | $4,264,739 |
| 3 | $1,389,093 | $1,829,801 | $3,218,894 |

### *Employment*

Within Oregon, it is estimated that contract investments would generate between 15.7 – 23.8 jobs depending upon the work (labor intensive versus equipment intensive), as well as additional indirect jobs for each $1 million invested (Economic and Employment Impacts of Forest and Watershed Restoration in Oregon, University of Oregon Ecosystem Workforce Program – Working Paper Number 24, spring 2010). Direct effect employment includes jobs created or maintained in businesses contracted to perform the work on the ground. Indirect effect employment includes those jobs associated with the demand for materials, supplies, equipment and other services needed to support the contract work.

*Table 7: Jobs by Alternative (based upon dollars invested)*

| Alternative | Direct Jobs | Indirect Jobs | Total Jobs |
|---|---|---|---|
| 2 | 59 | 72 | 131 |
| 3 | 44 | 49 | 94 |

### *Economic Output*

Total economic activity is the value of all of the goods and services produced as a result of the project work (Direct Output), as well as through the purchase of goods and services needed to support project implementation and the value of goods and services supported by household spending of income earned during project implementation (Indirect/Induced Output).

*Table 8: Total Economic Direct and Indirect Outputs for Investments*

| Alternative | Direct Outputs | Indirect Outputs | Total Outputs |
|---|---|---|---|
| 2 | $9,388,374 | $7,242,713 | $16,631,087 |
| 3 | $8,326,654 | $5,676,324 | $14,002,978 |

While Alternative 2 has the potential for the largest economic output for investments followed by Alternatives 3 one must consider the likelihood that adequate funds would be available to fully implement the project, and that a biomass market becomes established in an economically feasible proximity. Diminishing federal budgets have the potential to affect the Forests' ability to make these investments, particularly related to noncommercial fuel reduction activities. Each alternative is projected to produce a viable sales that will help offset the cost of non-commercial thinning cost flexibility with Logging systems when appropriate, road work, slash treatments, and utilization levels of the harvest are the primary factors contributing to this situation.

Funding for fuels related service work such as those proposed in the Sheep Creek project is typically associated with hazardous fuel treatment funds. The past 10-year average annual hazardous fuel funding allocation to the Wallowa-Whitman National Forest is less than $2 million. These funds support not only the federal personnel to do the planning, contract preparation and administration, but also pay for the implementation of contract work. In the Sheep Creek project, fuel reduction funding needs (Table 5) for completion of the contract work alone ranges from approximately ($2,196,040-$2,897,215). Given current funding levels, it would take at least 1-2 years to complete the noncommercial fuels reduction work in the Sheep Creek area with no funding available for any other fuel reduction work on the remainder of the forest. Additional funding support would most likely be needed to complete all the fuels reduction work for this project. Alternative 3 would have the least need, followed by Alternatives 2.

## Cumulative Effects

## Alternative 1

The no action alternative would not contribute to the economies of the counties surrounding this project area; therefore, it has the potential to further impact the current struggles of the timber industry in northeast Oregon. Economic contributions from recreation related activities would continue.

## Alternatives 2 and 3

The cumulative effect of Alternatives 2, and 3 are similar. They would all provide the counties surrounding the project area with timber receipts which otherwise would be dollars out of taxpayer pockets. They would provide jobs as described under the direct and indirect effects above. The income generated by this project contributes to family wage earners and local industries, which in turn support other local businesses, hospitals, and services contributing to the overall economic vitality of the Counties. The greatest incremental positive impact on the local economy would be associated with alternatives 2, then by 3. In addition, the alternatives and the effects would be similar when considering utilization of materials at manufacturing facilities. The products produced from this project under all of the action alternatives would not support the local businesses and mills alone; however, when added to the wood products being removed from other private, adjacent State, and corporate lands, as well as other national forest timber sales, it contributes to the overall viability and sustainability of local mills and businesses. The acres treated would provide seasonal work/benefits over a period of 8-10 years. Economic contributions from recreation related activities are not expected to change due to proposed forest management and restoration activities.